ORDER

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

7110. 102

9/27/88

SUBJ: AIR TRAFFIC PROCEDURES FOR IMPLEMENTATION OF LORAN-C

1. PURPOSE. This order establishes the procedures that apply specifically to the LORAN-C nonprecision approach implementation project which will be valid until operational approaches are commissioned at each of the implementation sites. Since the beginning of the LORAN-C early implementation approach project, air traffic's role has required positive direct communications between the pilot and the facility controlling the approach and monitoring LORAN-C.

2. DISTRIBUTION. This order is distributed to the branch level of Air Traffic, Development and Logistics, and Flight Standards in Washington; to Air Traffic, Airway Facilities, and Flight Standards divisions in the regional offices; Mike Monroney Aeronautical Center; and FAA Technical Center, and all field facilities and offices of Air Traffic, Airway Facilities, and Flight Standards.

3. BACKGROUND.

a. The FAA has established that LORAN-C is an interim supplemental system in the National Airspace System (NAS). The FAA has an airworthiness Advisory Circular (AC 20-120) and, with Radio Technical Commission for Aeronautics, Special Committee #137, has prepared and issued a Minimum Operation Performance Standard for LORAN-C.

b. In 1985, the FAA with the National Association of State Aviation Officials, began the LORAN-C nonprecision implementation project. The Office of Flight Standards, AFS-1, established procedures at eight airports to assist operators who wished to participate in the project. During the early phase, LORAN-C signal monitors were located in each of the eight towers that had an approved approach. Tower personnel's role was interactive during the approach in that they had to provide the pilot with current LORAN-C monitor information. As the FAA gained experience and confidence in the LORAN-C signal, the decision was made that a monitor could provide quality coverage of the LORAN signal for a radius of 90 NM. The operational aviation monitors will cover a 90 NM radius and will be located at specific VOR and TACAN sites throughout the NAS. In order to gain experience with a remote operational concept, some implementation monitors have been removed from the approach facility. During this extended LORAN-C implementation project, air traffic controllers still have the responsibility to provide the pilot with current LORAN-C information. This requirement will not carry over to operational LORAN-C approaches. The Coast Guard has agreed to implement an automatic aviation blink function at the LORAN-C transmitter site. This automatic blink function will be an addition to the current manual blink and brings Coast Guard monitoring of the LORAN-C signal in line with the executive monitor for a VOR. Integrity checks will be an integral part of the airborne reciever, and LORAN-C signal status information

will be monitored by the system engineer at the System Maintenance Monitor Console (SMMC). When LORAN-C is certified operational, the procedures to authorize, deny, or NOTAM a LORAN-C approach should be no different than existing procedures for any other nonprecision approach radionavigation aid in the NAS.

c. The following is a listing of LORAN-C implementation project approaches and monitor locations that have been approved:

Approach Location	Runway	Monitor Location
Bedford, MA, Hanscom	11	Transportation System Center
Mansfield, OH	32	Columbus, OH
Columbus, OH, Ohio University	09R	Columbus, OH
Portland, OR, International	10R	Portland, OR
Salem, OR, McNary	31	Portland, OR
Burlington, VT	15	Burlington, VT
Lake Front, LA	18R	Lake Front, LA
Venice, LA	Heliport	Lake Front, LA, +
Orlando, FL, Orlando Exec.	07	Orlando, FL
Kalamazoo, MI	23 & 25	South Bend, IN
Norwich, NY	19	Utica, NY
Atlantic City, NJ	Heliport	Millville, NJ
Trenton, NJ, Mercer County	06 ++	Millville, NJ
Manassas, VA	16L	Leesburg, VA
Cincinnati, OH, Blue Ash	24 ++	Columbus, OH

+Enunciator located at Houston Center
++Pending

NOTE: The procedures established in this order apply to only these 15 approaches. Once the flight inspection of procedures for Blue Ash, Ohio, and Mercer County, New Jersey, are approved, the development of LORAN-C approaches for the implementation project will be complete.

4. RESPONSIBILITIES. This order has been established to ensure that facilities with monitor installations/approaches under the implementation project coordinate to ensure air traffic's interactive role during the approach.

a. Monitor and approach location facilities shall conduct an annual review of existing LORAN-C approach procedures for simplicity and standardization of coordination, usage, and recommended changes necessary to meet user needs. A copy of the review will be forwarded to the appropriate regional office by September 1 of each year.

b. Regional Air Traffic Divisions shall:

(1) Ensure that implementation procedures for affected ATC facilities within their region are coordinated between monitor and approach facilities.

(2) Coordinate with other regions where responsibilities cross regional boundaries.

(3) Evaluate each facility's annual review for facility currency, usage, and recommended changes. Forward a copy of the evaluation to ATO-300 by October 1 of each year.

5. IMPLEMENTATION PROJECT PROCEDURES. The following is a list of air traffic procedures for use prior to and during a nonprecision LORAN-C implementation approach:

a. When it becomes known that a pilot intends to use the special LORAN-C procedure, ATC will handle the aircraft in accordance with Order 7110.65E, Air Traffic Control.

b. The controlling facility must contact the facility where the monitor is located to determine the status of the LORAN-C signal.

c. If at any time during the approach the controlling facility is made aware that the monitor is in alarm, the pilot will be advised using phraseology, "The LORAN monitor is in alarm, state your intentions." (Do not refer to monitor status unless it is in alarm.)

d. Should any facility request monitor status prior to passing the aircraft to the final controlling facility monitor status will be provided, and alternate approach instructions will be issued if the monitor is in alarm.

6. REQUESTS FOR INFORMATION. If further information or clarification is required, contact Leon Thomas, ATO-304, FTS 267-9355.

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